

REMARKS

Reconsideration and allowance of this application in light of the amendments presented herein, and in light of the accompanying remarks is respectfully requested.

A minor amendment has been made on line 21 of page 4 of the specification to correct the name of the element 101 to agree with the other portions of the specification as originally filed.

Clarifying amendments have been made to all of the previously pending claims 1-9 and 17-29.

Claims 10-16 remain withdrawn, but reinstatement is requested herein.

New claims 30, 31, and 32 have been added.

Support for the new claims and amended claims is found in the application specification, claims, and drawings as originally filed.

REQUEST TO REINSTATE WITHDRAWN  
CLAIMS 10-16 AND ALLOW CLAIMS 10-16

In view of the Examiner's determination in the Official Action dated March 3, 2003, that claim 1 is generic, and in view of the arguments presented below that claim 1 is allowable, applicants respectfully request reinstatement of the withdrawn claims 10-16. Further, allowance of claims 10-16 is respectfully requested.

THE REJECTIONS UNDER 35 U.S.C. §112 ARE OVERCOME

In item 3 of the Official Action, the Examiner rejected claims 1-9 and 17-24 under 35 U.S.C. §112.

The Examiner states that claims 1-3 set forth an attachment means which is “substantially undeformable,” and the Examiner, however, believes that the attachment means is flexible and deformable.

Independent claim 1 has been amended to set forth the attachment means being attached “without the skirt undergoing material flow deformation.” The phrase “material flow deformation” is used in the instant application specification on page 1, line 25, with respect to describing the deficiencies in the prior art wherein the prior art attachment device skirt and skirt lugs do undergo “material flow deformation.”

In contrast, and as set forth in the last two lines on page 1 of the instant application specification, the purpose of the present invention is to provide an attachment device wherein the skirt of the ring of the attachment device does not undergo any such material flow deformation. One of ordinary skill in the art would understand that the present invention, as normally used, does not undergo plastic, inelastic, permanent, deformation except at the “deformable flexible connection” of those embodiments that have such a connection (e.g., connection 106 in FIGS. 1 and 2). Further, one of ordinary skill in the art would understand that the term “material flow deformation” refers to the action of part of a structure undergoing plastic, inelastic, permanent deformation.

Further, with reference to the first eleven lines on page 6 of the instant application specification, the first embodiment of the invention is described as including an attachment ring wherein the deformable, flexible connection 106 undergoes permanent or material flow deformation, but that “no other part of the attachment ring undergoes” such permanent

deformation. Lines 3 and 4 of page 6 of the instant application specification specifically state that the plate 102 remains perfectly rigid and that the clip-on heads 109 are not deformed at all under the thickened rim 41 of the neck 40. Thus, as set forth in lines 9-11 on page 6 of the instant application specification, the movement of the plate 102 is not limited, but depends on the deformability of the flexible connection 106, and this compensates for tolerances in the length of the recipient neck 40.

In view of the above discussion, and in view of the amendment to independent claim 1, it is believed that independent claim 1 is now even more clear and definite. Accordingly, withdrawal of the rejection of claim 1 under 35 U.S.C. §112 is respectfully requested.

Dependent claims 2 and 3 have also each been amended to set forth the structure wherein the installation takes place “without” material flow deformation of the clip-on heads 109 (part of the “attachment means”) and/or the plate 102. Accordingly, it is believed that claims 2 and 3 are even more clear. Therefore, withdrawal of the rejection of claims 2 and 3 under 35 U.S.C. §112 is respectfully requested.

Independent claim 17 was similarly rejected by the Examiner in item 3 of the Official Action as being indefinite because of the use of the term “a substantially undeformable annular plate.” However, in view of the fact that the annular plate 102 per se is not permanently deformable and does not undergo material flow deformation in the normal use of the invention as claimed, and in view of the amendment to independent claim 17 setting forth that the plate is installed “without” undergoing material flow deformation, it is believed that claim 17 is now even more clear and definite with respect to the recited lack of

deformation of certain components. Accordingly, withdrawal of the rejection of claim 17 with respect to the lack of deformation of plate 102 is respectfully requested.

Claim 17 was also rejected under 35 U.S.C. §112 by the Examiner, in item 6 of the Official Action, in view of the use of the phrase “not definitively mounted.” The phrase “not definitively mounted” has been deleted. The last subparagraph of the claim has been rewritten to make it clear that the deformable flexible connection 106 is spaced from the recipient neck 40 when the attachment means is not engaged with the recipient neck rim.

In view of the amendment to the last subparagraph of claim 17, it is believed that claim 17 is now even more clear and definite. Accordingly, withdrawal of the rejection of claim 17 under 35 U.S.C. §112 for use of the term “not definitely” is respectfully requested.

Dependent claim 21 was rejected in item 3 of the Official Action under 35 U.S.C. §112 as being indefinite for referring to “a helical outer edge of the plate.” The claim has been amended to remove the phrase “at a helical,” and to instead define the recess as provided “adjacent the outer edge of the plate.” In view of the amendment to claim 21, it is believed that claim 21 is even more clear and definite. Accordingly, withdrawal of the rejection of claim 21 under 35 U.S.C. §112 is respectfully requested.

Independent claim 25 was rejected by the Examiner in item 6 of the Official Action under 35 U.S.C. §112 for using the phrase “not definitively mounted” and for using the phrase “definitely [sic] mounted.”

The penultimate subparagraph of independent claim 25 has been amended to delete the terms “definitively.” It is believed that the independent claim 25 is even more clear and

definite. Accordingly, withdrawal of the rejection of independent claim 25 under 35 U.S.C. §112 is respectfully requested.

The dependent claims 18-24 are dependent upon independent claim 17, and the dependent claims 26-29 are dependent upon independent claim 25. In item 5 of the Official Action, the dependent claims 18-24 and 26-29 were rejected under 35 U.S.C. §112 for the reason that they depend from the independent claims 17 and 25, respectively. In view of the amendments to independent claims 17 and 25 discussed above, it is believed that dependent claims 18-24 and 26-29 are now even more clear and definite. Accordingly, withdrawal of the rejections of the dependent claims 18-24 and dependent claims 26-29 under 35 U.S.C. §112 is respectfully requested.

THE NEW CLAIMS 30, 31, AND 32 ARE ALLOWABLE

--Claim 30

New independent claim 30 is directed to an aspect of the invention which encompasses, inter alia, the embodiment illustrated in FIGS. 1 and 2.

New independent claim 30 sets forth, inter alia, the plate (102) connected to the skirt (101) with a deformable flexible connection (106) wherein the connection (106) has an initial state when the attachment device (1) is not mounted on the recipient neck (40), and a final deformed state when the attachment device (1) is mounted on the recipient neck (40).

Independent claim 30 further sets forth the initial state of the connection (106) as being offset axially further from the plate (102) in a step-like configuration (see FIG. 1). New independent claim 30 further sets forth the final deformed state of the connection (106) as having an

inverted V-shaped cross-sectional configuration (see FIG. 2).

The art cited by the Examiner does not show such a deformable connection having such an initial state and such a final deformed state as set forth in new independent claim 30.

Accordingly, new independent claim 30 sets forth patentable subject matter.

Allowance of new independent claim 30 is respectfully requested.

--Claim 31

New independent claim 31 is directed to another aspect of the invention which includes, inter alia, the embodiment illustrated in FIG. 3. New independent claim 31 sets forth, among other things, a notch which opens toward the attachment means to define a region of weakness for subsequently accommodating material flow deformation of the connection (106) when the attachment device (1) is mounted on the recipient neck (40).

The prior art cited by the Examiner does not teach or suggest the deformable connection of the type set forth in new claim 31. Therefore, allowance of new claim 31 is respectfully requested.

--Claim 32

New independent claim 32 is directed to a further aspect of the invention which includes, inter alia, the fourth embodiment illustrated in FIG. 4. New claim 32 sets forth, among other things, the initial state of the connection (106) having a plurality of radial spacers (106') which join the plate (102) to the skirt (101) and which define a plurality of gaps (106'') as shown in FIG. 4. The gaps (106'') weaken the connection (106) for subsequently accommodating material flow deformation of the connection (106) when the

attachment device (1) is mounted on a recipient neck (40).

The prior art references cited by the Examiner do not teach or suggest such a deformable connection as set forth in new independent claim 32. Accordingly, allowance of new independent claim 32 is respectfully requested.

THE PRIOR ART REJECTIONS OF CLAIMS 17-29 ARE OVERCOME

Of the presently pending group of rejected claims 17-29, only claims 17 and 25 are independent claims, and each of the remaining claims is directly or indirectly dependent upon one of the independent claims. The two independent claims have been rejected as unpatentable over the U.S. Patent No. 5,799,810 (to de Pous et al.). The dependent claims 18-24, 26, 28, and 29 have also been rejected as unpatentable over de Pous et al. Dependent claim 27 has been rejected as unpatentable over de Pous et al. in view of U.S. Patent No. 6,253,941 (to Van Broklin).

--Claims 17-24

Independent claim 17, and claims 18-24 which are directly or indirectly dependent thereon, set forth a deformable flexible connection (e.g., element 106 in FIG. 1 as described in the specification at page 6, lines 2-11 and page 8, lines 1-4). The flexible connection is spaced from the upper end of the recipient (e.g., container 4) at least when the device 1 attachment means is initially not engaged with the recipient rim 41 to attach the device 1 (e.g., prior to the attachment means engaging below the recipient rim 41), but the skirt 101 is in contact only with the recipient rim 41, and only the plate 102 is in contact with the recipient neck upper end 42 (or optional seal 3 if one is used).

Independent claim 17, as amended, further specifically sets forth the plate as being designed to be pressed against the upper end 42 of the neck 40 without undergoing material flow deformation.

The phrase “material flow deformation” is employed in the specification on page 1, line 25, to describe how the attachment device lugs of the prior art are deformed during installation. One of ordinary skill in the art understands this “material flow deformation” of the prior art lugs to be a plastic, inelastic, permanent deformation which occurs during the intended normal installation procedure.

As set forth in the last two lines on page 1 of the specification, the present invention has a skirt (which includes an attachment means) which does not undergo any such material flow deformation that produces a plastic, inelastic, permanent material flow of the present invention ring skirt (e.g., skirt 101 in FIG. 1). The skirt 101 is defined in the specification (e.g., in the last paragraph on page 4) as including the “attachment means” which, in the preferred embodiment, include the lugs 108 and clip-on heads 109. As set forth in the last sentence on page 4 of the specification, the clip-on heads 109 in the instant application are located at the ends of the lugs 108, and the heads 109 have a degree of freedom in the radial direction. However, the lugs 108 and heads 109 do not undergo a material flow deformation (i.e., plastic, inelastic, permanent deformation) when the heads 109 are pushed onto and below the recipient rim 41 on the neck of the recipient or container. This is because of the novel system employed in the present invention set forth in claim 17 wherein only the novel deformable, flexible connection (e.g., connection 106) undergoes material flow deformation



(i.e., plastic, inelastic, permanent deformation).

The specification, on page 6, in the second through fifth lines, emphasizes the fact that no other part of the attachment ring 10 undergoes permanent deformation except for the deformable, flexible connection 106. The deformability of the connection 106 accommodates movement of the plate 102 during installation so as to compensate for tolerances in the length of the recipient neck 40. This is described in the first eleven lines on page 6 of the specification.

The de Pous et al. patent discloses an attachment device which includes a gasket 7 made of elastomeric material which is easily compressible. The function of the gasket 7 is to provide a seal. It is not used as a method of attaching the attachment device. In order to compress the gasket 7 in the de Pous et al. structure for providing an adequate seal, the plate 11 of the ring in the de Pous et al. structure must be dimensionally stable. The plate 11 of the ring in the de Pous et al. structure clearly does not permanently deform during the normal installation procedure of mounting the attachment device.

The de Pous et al. patent does not teach the desirability of providing some sort of permanently deformable connection to a rigid plate as part of the normal operation of the attachment device. The de Pous et al. patent does not attempt to design a flexible, permanently deformable connection as part of a ring to assist in mounting the attachment device. In fact, one of ordinary skill in the art considering the de Pous et al. disclosure would be led away from the novel approach employed in the instant invention as set forth in the instant application independent claim 17. Thus, it is believed that independent claim 17, as

amended, is allowable over de Pous et al. Accordingly, withdrawal of the rejection of the prior art rejection of independent claim 17 is respectfully requested.

Claims 18-24 are each directly or indirectly dependent upon independent claim 17. Because the dependent claims 18-24 include all of the features of independent claim 17, as amended, it is believed that claims 18-24 are also allowable. Accordingly, withdrawal of the prior art rejection of dependent claims 18-24 is respectfully requested.

--Claims 25-29

With respect to claims 25-29, only claim 25 is an independent claim.

Amended independent claim 25 sets forth the attachment means as having an initial state wherein the attachment means is not engaged with the recipient neck to attach the device 1, and having a final state wherein the attachment means is engaged with the recipient neck to attach the device 1--the initial and final states of the attachment means being substantially identical so that the attachment means is substantially undeformed (i.e., so that there is substantially no plastic, inelastic, permanent deformation of the attachment means (e.g., clip-on heads 109)).

Independent claim 25, as amended, also sets forth the plate 102 as being connected to the skirt 101 by a deformable flexible connection 106 wherein the connection 106 has an initial state when the attachment device is not mounted on the recipient neck, and has a final deformed state when the attachment device 1 is mounted on the recipient neck 40.

As explained above in arguing for the allowability of independent claim 17, the de Pous et al. patent does not teach the use of a plate connected to a special deformable, flexible

connection which undergoes material flow deformation (i.e., undergoes a plastic, inelastic, permanent deformation). The de Pous et al. patent structure is not intended to normally function during installation to cause a permanent, elastic, material flow deformation of a connection between a plate (de Pous et al. plate 11) and a surrounding skirt of a ring (de Pous et al. ring 10). The various figures in the de Pous et al. patent do not show any deformation of a connection portion between the plate 11 and the ring 10 (compare de Pous et al. FIGS. 1 and 4a with FIGS. 3, 4b, 4c, 8a, and 8b).

One of ordinary skill in the art would be led by the teachings of de Pous et al. away from the novel system of the present invention wherein a special deformable flexible connection is provided as set forth in independent claim 25, as amended. Accordingly, independent claim 25, as amended, sets forth patentable subject matter. Therefore, withdrawal of the rejection of independent claim 25, as amended, is respectfully requested.

Claims 26-29 are each directly or indirectly dependent upon independent claim 25. Therefore, dependent claims 26-29 include all of the features of independent claim 25. Dependent claims 26-29 should be allowable for the same reasons that independent claim 25 is allowable. Accordingly, withdrawal of the rejection of dependent claims 26-29 is respectfully requested.

#### THE PRIOR ART REJECTIONS OF CLAIMS 1-9 ARE OVERCOME

Of the presently pending rejected claims 1-9, only claim 1 is an independent claim, and each of the remaining claims 2-9 is directly or indirectly dependent upon independent claim 1. The independent claim 1 has been rejected as unpatentable over the U.S. Patent No.

5,799,810 (to de Pous et al.). The dependent claims 2-9 have also been rejected as unpatentable over de Pous et al.

As now amended, independent claim 1 sets forth, inter alia, an attachment means which is attached “without the skirt undergoing material flow deformation.” As discussed above with reference to independent claim 17, the phrase “material flow deformation” is employed in the specification to describe prior art structures which undergo plastic, inelastic, permanent deformation which occurs during the intended normal installation procedure.

As set forth in the last two lines on page 1 of the specification, the present invention has an attachment device wherein the skirt does not undergo any such material flow deformation (i.e., plastic, inelastic, permanent deformation). The instant application specification, on page 6, lines 7-11, describes the use of the hoop 13 (e.g., see FIG. 1) which is fitted on the ring 10 but which performs only a locking function, but not a camming function that would deform the attachment means or skirt 101 of which the attachment means is a part.

The skirt 101 is defined in the specification (e.g., in the last paragraph on page 4) as including the “attachment means” which, in the preferred embodiment, include the lugs 108 and clip-on heads 109. As set forth in the last sentence on page 4 of the specification, the clip-on heads 109 in the instant application are located at the ends of the lugs 108, and the heads 109 have a degree of freedom in the radial direction. However, with the novel system employed in the present invention set forth in claim 1, the portion of the skirt 101 above lugs 108 and heads 109, as well as the lugs 108 and head 109 per se, do not undergo a material

flow deformation (i.e., plastic, inelastic, permanent deformation) when the heads 109 are pushed onto and below the recipient rim 41 on the neck of the recipient or container and when the hoop 13 is pushed down along the skirt 101 (including along the lugs 108 and heads 109). Rather, only the novel deformable, flexible connection (e.g., connection 106) undergoes material flow deformation (i.e., plastic, inelastic, permanent deformation).

The specification, on page 6, in the second through fifth lines, emphasizes the fact that no other part of the attachment ring 10 undergoes permanent deformation except for the deformable, flexible connection 106. The deformability of the connection 106 accommodates movement of the plate 102 during installation so as to compensate for tolerances in the length of the recipient neck 40. This is described in the first eleven lines on page 6 of the specification.

The Examiner has rejected independent claim 1 and its dependent claims 2-9 as being unpatentable over de Pous et al.

The de Pous et al. patent discloses an attachment device which includes a ring 10 with tabs 12. The de Pous et al. patent figures show a number of embodiments with such tabs 12. The upper portions of the tabs 12 are deformed in a permanent manner by a downwardly moved hoop 20 which presses into the exterior side of the ring 10, including the tabs 12. Note that in the de Pous et al. patent, FIGS. 5, 6, 7, 11, and 12, the hoop wall 21 of the hoop 20 has hard, interior projections (e.g., 22, 22a, 24, 24a) which engage and permanently deform the ring 10, including the upper, exterior sides of the tabs 12. Specifically, note that in the de Pous et al. patent FIG. 4c the hoop has a projection 22 which has pressed into, and

deformed, the exterior surface of the ring, including an upper portion of the tabs 12. FIG. 8b shows an alternate embodiment of the hoop 20 which also deforms the surfaces of the ring 10 and tabs 12. Indeed, the de Pous et al. patent, in column 9, lines 19-23, explicitly describes how the material of the ring 10 “cold flows or creeps to match or conform to the shape of the projection 24 of the hoop 20” [emphasis supplied].

The material flow deformation of the ring skirt portion of the de Pous et al. structure is clearly contrary to the nature of the invention set forth in the instant application amended claim 1 which explicitly requires that the attachment means is “attached without the skirt undergoing material flow deformation.”

The de Pous et al. patent does not teach the desirability of providing such a novel attachment means wherein the attachment means is attached without the skirt undergoing material flow deformation. The de Pous et al. patent does not attempt to address such a concept. Indeed, the teachings of de Pous et al. are contrary to the novel approach employed in the instant invention as set forth in the instant application claim 1.

In view of the above discussion, it is believed that the instant application independent claim 1, as amended, is allowable over de Pous et al. Accordingly, withdrawal of the rejection of independent claim 1 is respectfully requested.

Dependent claims 2-9 are each directly or indirectly dependent on independent claim 1 discussed above. Therefore, each of the claims 2-9 includes all of the features set forth in independent claim 1. For the reasons given above in arguing for the withdrawal of the rejections of claim 1 over de Pous et al., the dependent claims 2-9 should also be allowable.

Serial No. 09/775,949 - - - 29



Accordingly, withdrawal of the rejections of dependent claims 2-9 is respectfully requested.

-----

Further, it is believed that this entire application is now in condition for allowance, and such action is respectfully requested.

Respectfully submitted,

WOOD, PHILLIPS, KATZ, CLARK & MORTIMER

By

A handwritten signature in cursive script, appearing to read "Paul M. Odell", written over a horizontal line.

Paul M. Odell, Reg. No. 28,332

500 West Madison Street, Suite 3800  
Chicago, Illinois 60661-2511  
(312) 876-1800

RECEIVED  
MAR 18 2004  
TECHNOLOGY CENTER R3700

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with sufficient postage as First Class Mail in an envelope addressed to Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450, on March 12, 2004.

A handwritten signature in cursive script, appearing to read "Paul M. Odell", written over a horizontal line.

Paul M. Odell